

## ABSTRACT OF THE DISCLOSURE

A carbon nano material and a resin binder are plasticized and injection molded to form a preliminarily  
5 molded member. The preliminarily molded member is degreased by a heat treatment and made to a preliminarily molded porous member composed of the carbon nano material. The preliminarily molded porous member is inserted into a cavity of a product mold. A molten low melting point metal is  
10 injected into and fills the cavity. The preliminarily molded porous member is impregnated with the low melting point metal by injection pressure, thereby a composite metal product composed of the low melting point metal material integrally composited with the carbon nano material is molded. With the  
15 above arrangement, the characteristics of the carbon nano material are applied to the composite metal product to improve the functions thereof.